

### REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 2, 4, and 5 are pending in this case. Claim 1 is amended to incorporate the subject matter of originally-filed Claims 3, 6, and 7, Claims 2, 4, and 5 are amended to correct matters of form, Claim 8 is added to recite the limitations of amended Claim 1 in non-means-plus-function format, and Claims 3, 6, and 7 are canceled by the present amendment. No new matter is added.

In the outstanding Office Action, Claim 1 was rejected under 35 U.S.C. §103(a) as unpatentable over Hirota, et al. (U.S. Patent No. 6,064,749, herein "Hirota"), in view of Abita, et al. (U.S. Patent No. 5,838,238, herein "Abita"); Claim 2 was rejected under 35 U.S.C. §103(a) as unpatentable over Hirota and Abita, further in view of Chun, et al. (U.S. Patent No. 5,176,082, herein "Chun"); Claim 3 was rejected under 35 U.S.C. §103(a) as unpatentable over Hirota and Abita, further in view of Crossley, et al. (U.S. Patent No. 4,924,506, herein "Crossley"); Claim 4 was rejected under 35 U.S.C. §103(a) as unpatentable over Hirota and Abita, further in view of Darrell, et al. (U.S. Patent No. 6,188,777 B1, herein "Darrell"); Claim 5 was rejected under 35 U.S.C. §103(a) as unpatentable over Hirota and Abita, further in view of Hiroshi, et al. (Japanese Pub. 07-228250, herein "Hiroshi"); and Claim 6 was rejected under 35 U.S.C. §103(a) as unpatentable over Hirota and Abita, further in view of Lees, et al. (U.S. Patent No. 4,695,959, herein "Lees") and Chun. Claim 7 was not rejected, indicated as allowable, or indicated as withdrawn from consideration in the outstanding Office Action.

The subject matter of Claims 3, 6, and 7 is included in amended Claim 1. Therefore, the rejections of Claims 3 and 6 are addressed with regard to amended Claim 1.

Amended Claim 1 is directed to a safety monitoring device in a station platform and includes:

image processing means for picking up a platform edge through a plurality of stereo cameras at the platform edge on a railroad-track side of a station and generating image information based on a picked-up image in a view field and distance information based on a coordinate system of the platform per stereo camera,

means for recognizing an object based on distance information and image information transmitted from each of the stereo cameras, and means for confirming safety according to the state of the recognized object; wherein

the means for recognizing the object based on the distance information and the image information transmitted from each of the stereo cameras performs recognition using a higher-order local autocorrelation characteristic,

said higher-order local autocorrelation characteristic is used for determining whether ahead and behind time-series distance information existing at predetermined positions in a predetermined area pertains to a same person, and

the predetermined positions correspond to a plurality of blocks obtained by dividing the predetermined area, and a next search for the time-series distance information is performed by calculating the higher-order local autocorrelation characteristic for at least two blocks of said plurality of blocks.

The outstanding Office Action cited Hirota as teaching all the elements of Claim 1 except platform safety, for which it cited Abita. The outstanding Office Action additionally cited Crossley for Claim 3, which is incorporated in amended Claim 1, and additionally cited Lees and Chun for Claim 6, which is also incorporated in amended Claim 1.

Hirota describes a head-mounted display with head pose determination to better match real objects with computer-generated objects. At column 8, lines 15-37, Hirota describes detecting landmarks as references for the purpose of head pose adjustment. At column 12, lines 60-67, Hirota describes using the nearest point on a sphere centered on a landmark to adjust head position.

However, Hirota does not teach or suggest edge detection. Hirota discusses computing the lengths of the 3 edges at column 13, lines 51-67. However, the lengths of the 3 edges referred to in Hirota are the differences in distance from a camera to the center of each of the landmarks. Therefore, Hirota does not teach or suggest “picking up a platform edge through a plurality of stereo cameras at the platform edge on a railroad-track side of a station and generating image information based on a picked-up image,” as recited in Claim 1.

Additionally, Abita, Crossley, Lees, and Chun do not cure the deficiencies of Hirota and are not cited as teaching the features deficient in Hirota with respect to Claim 1.

The combination of Lees and Chun was additionally cited against Claim 6, which is incorporated in amended Claim 1 to define “said higher-order local autocorrelation characteristic is used for determining whether ahead and behind time-series distance information existing at predetermined positions in a predetermined area pertains to a same person.” However, the combination of Lees and Chun does not teach or suggest this feature, and neither Hirota or Abita cures this deficiency nor is cited as doing so.

Lees describes creating a topographical range map of a scene by collecting a digitized image stream. Chun describes using infrared beams at passing passenger sensing posts to count the number of passengers in a subway station. The combination of Lees and Chun does not teach or suggest using a higher-order local autocorrelation characteristic for determining whether information pertains to a same person as defined by amended Claim 1. The outstanding Office Action asserts, at page 8, that Chun “teaches monitoring and recording train passenger’s movements,” but Chun only describes monitoring numbers of passengers and, thus, does not teach or suggest determining whether information “pertains to a same person,” as recited in amended Claim 1.

As set out at MPEP § 2142, a *prima facie* case of obviousness requires, first, that there must be some suggestion or motivation to modify the reference or combine the

reference teachings; second, that there must be a reasonable expectation of success; and, finally, that the proposed combination must teach or suggest all the claim limitations.

Because the combination of Hirota, Abita, Crossley, Lees, and Chun does not teach or suggest at least the features of amended Claim 1 discussed above, a *prima facie* case of obviousness has not been established.

Further, the combination of Hirota with a reference pertaining to safety in a station platform, such as Abita, is not proper. The Court recently reiterated the requirement of MPEP § 2143.01 by stating that a “patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art.” KSR Int. Co. v. Teleflex Inc., 82 USPQ2d 1385, 1389 (2007). The Court stated the importance of identifying “a reason that would have prompted a person of ordinary skill in the art to combine the elements as the new invention does.” *Id.* Here, not only is each element of amended Claim 1 not taught or suggested by the combination, but the rationale for the combination is also not identified. The outstanding Office Action states, at page 4, that Hirota “supplies a method of tracking objects and stationary landmarks while Abita shows the need and one method for improving safety at train platform edges.”

However, Hirota does not, in fact, teach or suggest tracking objects but, rather, using known landmarks to determine a camera-wearer’s head position. As discussed above, Hirota describes cameras mounted on a person’s head and the use of known landmarks as references to account for the position of the camera-wearer’s head to better match real objects with computer-generated objects. Thus, a rationale for combining such a system with a platform safety method to result in stereo cameras that are stationary and, therefore, do not need position adjustment processing, is not put forth in the outstanding Office Action.

Because at least two of the requirements for a *prima facie* case of obviousness are not met, Applicants respectfully request that the rejection of Claim 1 under 35 U.S.C. § 103(a) be withdrawn.

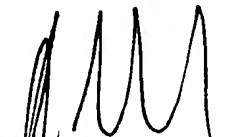
Claims 2, 4, and 5 depend from Claim 1, and Darrell, which is additionally cited against Claim 4, and Hiroshi, which is additionally cited against Claim 5, fail to cure the deficiencies of the references discussed above with respect to Claim 1. Thus, Applicants respectfully request that the rejections of Claims 2, 4, and 5 under 35 U.S.C. § 103(a) be withdrawn.

Claim 8 differs in scope and statutory class from Claim 1 but is respectfully submitted as patentably defining over the combination of Hirota, Abita, Crossley, Lees, and Chun for substantially the same reasons as discussed above with respect to Claim 1.

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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